REMARKS/ARGUMENTS

The claims are 1-7.

Applicants would like to thank the Examiner for the courtesy of a telephone interview on March 9, 2009, the substance of which is set forth herein. The Office Action indicated that claims 1-7 were objected to under 37 C.F.R. 1.75 as not having been numbered. In the March 9, 2009 telephone interview, the Examiner confirmed that the claims have in fact been correctly numbered and that the objection under 35 C.F.R. 1.75 could be disregarded.

Claims 1-7 were rejected under 35 U.S.C. 103(a) as being unpatentable over *Osakabe et al. U.S. Patent No. 5,448,562* in view of *Tanaka et al. U.S. Patent No. 5,631,850*. Essentially the Examiner's position is that *Osakabe et al.* discloses the system recited in the claims, except for a serial bus which is said to be taught by *Tanaka et al.*

This rejection is respectfully traversed and reconsideration

is expressly requested.

As set forth in claim 1, Applicants' invention provides a system for transmitting data in a serial bidirectional bus with a control device including a send and receiving unit for data fields combined into a data frame, and with bus subscribers which include an evaluation circuit for reading in and reading out data fields in data frames. At least the bus subscriber at the bus end opposite of the control device includes a send device for a data frame.

As recited in claim 1, at least the bus subscriber at the end of the bus includes a control stage which is activated by a received data frame and triggers the send device depending on the receipt of a data frame within the terms of the transmission of a data frame for at least the data fields of the bus subscribers.

In this way, Applicants' invention provides a system for transmitting data in a serial bidirectional bus with a control device that provides a simplified data transmission, has a low

constructional complexity, and ensures a high data transmission rate.

Applicants' system as recited in claim 1 uses a serial bidirectional bus for which there is no continuous bus line. Rather, every bus subscriber is connected to the previous bus subscriber via a piece of the bus line. See e.g. FIG. 1, line 5. With Applicants' system as recited in claim 1, a data frame is sent over the bus that contains data fields for all bus subscribers because a data frame is forwarded from a bus subscriber to the next bus subscriber, i.e. the data frame passes through all serially connected bus subscribers. Every data frame sent over the bus includes data fields for each subscriber.

When the control device sends a data frame, each subscriber reads out its data field (the position of the data field in the data frame is known). A message from a bus subscriber to the control device (e.g. a response to a message from the control device) is initiated from the bus subscriber at the end of the bus opposite to the control device by generating a data frame

which already contains (still empty) data fields for each bus subscriber. As the such generated data frame is passed back to the control device from one subscriber to the next, every subscriber writes its own data into the reserved data field of the data frame.

None of the cited references discloses or suggests a communication protocol in which a frame is handed over from one bus subscriber to the next bus subscriber wherein the frame contains data for or from all bus subscribers as results from Applicants' system as recited in claim 1.

The primary reference to *Osakabe et al.* discloses a communication system using a bidirectional bus in which a data frame is sent from a first bus subscriber to a second bus subscriber, as is common in bus systems. In other words, the data frame is destined for a certain bus subscriber and, therefore, contains also address data which allows the selection of the desired subscriber which is typical for communication over a non-serial bus in which every bus subscriber is connected to a

continuous bus line. See *Osakabe et al.*, FIG. 8, bus lines 1. There is no disclosure or suggestion of a serial bidirectional bus in which there is no continuous bus line and every bus subscriber is connected to the previous bus subscriber via a piece of the bus line. Thus, different communication methods necessarily need to be applied for the different bus types involved in Applicants' system and the system of *Osakabe et al.* In addition, there is no bus subscriber at the end of the bus in *Osakabe et al.'s* system because in a non-serial bus there is no "end" of the bus. Thus, it is respectfully submitted that the communication method that Applicants' system as recited in claim 1 uses would never be implemented in a non-serial bus as in *Osakabe et al.* as doing so would unnecessarily increase the length of sent data frames because a data frame would then contain data not required in the communication between two bus subscribers, which would consequently detrimentally decrease the available communication bandwidth.

The defects and deficiencies of the primary reference to *Osakabe et al.* are nowhere remedied by the secondary reference to

Tanaka et al. *Tanaka et al.* shows a D2B bus which is a serial bidirectional bus. D2B is a standardized protocol which was developed in the 1970s and is described in *Osakabe et al.* in FIGS. 1 to 5C and column 1, line 20 to column 5, line 34. More information on D2B (or 12C) can be found on the Internet. Thus, it becomes apparent that also with D2B a frame is destined for a certain bus subscriber by indicating the slave address in the frame. In other words, *Tanaka et al.* also refers to a communication protocol in which a frame is sent from a certain source (master address) to a certain destination (slave address). In *Tanaka et al.*, the frame is sent over a serial bus and in *Osakabe et al.* the frame is sent over a non-serial bus.

Nevertheless, like *Osakabe et al.*, there is no disclosure or suggestion of a communication protocol in which a frame is handed over from one bus subscriber to the next bus subscriber wherein the frame contains data for or from all bus subscribers which results from Applicants' system as recited in claim 1.

Accordingly, it is respectfully submitted that the claims are patentable over the cited references whether considered alone or in combination.

In view of the foregoing, it is respectfully requested that the claims be allowed and that this application be passed to issue.

Respectfully submitted,
Josef RAINER ET AL

COLLARD & ROE, P.C.
1077 Northern Boulevard
Roslyn, New York 11576
(516) 365-9802

Frederick J. Dorchak, Reg. No.29,298
Edward R. Freedman, Reg. No.26,048
Attorneys for Applicants

FJD:cmm

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Amy Klein

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